WATER QUALITY POLLUTANT TRADING IN IDAHO:

A STEP-BY-STEP AGRICULTURAL COMMUNITY GUIDEBOOK

June 2004

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- ***the Idaho Water User's Association;***
- ***the Idaho Soil Conservation Commission;***
- ***the Natural Resource Conservation Service;***
- ***the Idaho Department of Environmental Quality; and***
- ***the United States Environmental Protection Agency Region 10 office.***

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PURPOSE OF THIS GUIDEBOOK

This Guidebook introduces an innovative way to help clean up Idaho rivers and lakes and make, or save, money doing it. The guidebook will assist you, as a farm or irrigation system owner/operator, to understand and execute a water quality pollutant trade.

This text provides detailed guidance on how to execute a water quality pollutant trade for agricultural operators in a watershed with an established market. It provides agricultural operators in other watersheds with an understanding of how trading could operate and enables effective participation in any new market development efforts.

In 2001, the State of Idaho established a pollutant trading marketplace for agricultural, industrial, and municipal sources of phosphorus in the Lower Boise River Watershed. The Idaho Department of Environmental Quality (DEQ) developed the Lower Boise River pollutant trading marketplace in anticipation of the likely need to reduce phosphorus discharges in response to water quality concerns.

This guidebook uses the Lower Boise River marketplace to provide an example-based, step-by-step guide for how an agricultural operator can trade with an industrial or municipal facility that holds a water quality permit. If you operate in a different watershed, this guidebook equips you to understand if and when your watershed may develop a marketplace and your opportunities if one were to emerge. If the market focuses on nutrients (such as phosphorus or nitrogen) or sediment, farm and irrigation system owner/operators may have an opportunity to trade.

1. WHAT IS WATER QUALITY POLLUTANT TRADING?

Water quality pollutant trading is a contractual agreement to exchange pollutant reductions between two partners. It is a voluntary, businesslike way of helping solve water quality problems.

Trading does not create new regulatory obligations. Trading partners execute trades through private contracts. Pollutant trading is beneficial when pollutant sources face substantially different pollutant reduction costs. Typically, a person or entity facing high pollutant control costs pays another person to create a less costly pollutant reduction.

In the case of farm and irrigation system owner/operators, trading will typically occur with an industrial plant or a municipal wastewater treatment plant that has a water quality permit. It is likely that some farm and/or irrigation system owner/operators can reduce pollutants at lower cost than these facilities.

Under the Idaho trading approach, you cannot sell all of your reductions. You must first set aside a water quality contribution consistent with reductions needed for water quality improvements in your watershed. DEQ will identify the needed level of water quality improvement and associated water quality contributions.

2. DOES YOUR WATERSHED HAVE A WATER QUALITY POLLUTANT TRADING MARKETPLACE?

Water quality improvement needs drive trading marketplaces. Pollutant sources that create tradeable credits can participate. Contact the Soil Conservation Commission (SCC) to find out if nutrient or sediment reductions are needed (see contact details in Appendix A).

EXAMPLE

John is a farm owner/operator on Conway Gulch, a tributary of the Lower Boise River (LBR). He works a 300 acre farm with 10 surface irrigated fields, 30 acres each. As of 1996, he utilized flood irrigation methods. His fields are located 2.5 miles from the river. John heard that the LBR needs water quality improvements, but he isn't clear on how he fits in. From the SCC, John learns that the LBR has a phosphorus trading marketplace and a list of approved agricultural BMPs.

3. CAN YOU CREATE TRADEABLE CREDITS?

You create tradeable credits in four steps:

I. Calculate your field edge baseline pollutant load;
II. Calculate BMP reductions;
III. Account for your water quality contribution;
IV. Adjust your reductions for water quality impact.

To conduct these steps, you will need a copy of the Best Management Practice List (BMP List) created for your marketplace. You can obtain this document from the SCC or DEQ, or you can download a copy from the Internet (see Appendix A for contact information and website address).

I. Baseline Pollutant Load

You first need to determine your baseline nutrient or sediment load. In some circumstances, you will be able to measure your run-off directly, but it's more likely that you will calculate it.

Your baseline pollutant load refers to the amount of nutrient or sediment loss from your property at a point in time. For each trading marketplace, DEQ will designate the baseline year (1996 for the Lower Boise). You calculate your baseline load for the baseline year and use it to determine the eligibility of reductions for trading. For instance, if the baseline year is 1996 and you installed a BMP in 1999, you have already created eligible reductions. However, pollutant reductions from a BMP installed in 1994 would not be eligible.

The USDA Surface Irrigation Soil Loss (SISL) equation is the most effective way to calculate your baseline load. As part of the SISL, your marketplace will have an average subwatershed Base Soil Loss (BSL) factor to account for crop rotation soil loss variability. The BMP List Document for your marketplace will contain the relevant SISL BSL table.

EXAMPLE Con't

Intrigued by what he believes is a good opportunity, John calculates his baseline phosphorus load.

Over his 300 acre farm, there is a field slope of 2.2 percent which, based on the SISL BSL tool in Table 4 on page 4 of the LBR BMP List document, indicates his SISL BSL load is 15.7 tons of soil lost per acre per year. The document also indicates that a typical phosphorus run-off ratio of 2 pounds per ton of soil loss is appropriate.

John figures his baseline phosphorus load:

Acres of land x SISL BSL load x Phosphorus loss per ton of soil
300 acres x 15.7 tons soil lost/acre/year x 2 lbs. phosphorus/ton soil lost =
9420 Baseline Load (lbs./year)

II. Calculate Reduction from your BMP

To create tradeable credits, you will change management practices to reduce pollutant run-off after the baseline year. It will be up to you to determine which practice suits your property and desired reduction.

Once you have chosen a BMP, you will need to measure or calculate the impact. In general, very few management practices, particularly when implemented on a field scale basis, will support direct measurement. The approved BMP List will show you how to calculate your BMP's impact. The BMP List also provides information on direct measurement if your BMP supports it and you decide to take this approach.

The BMP List provides effectiveness ratings and uncertainty discounts for calculated BMPs. The rating shows the effect of the BMP on pollutant run-off, and the uncertainty discount accounts for BMP variability. For example, a microirrigation system has a 2 percent uncertainty discount; a surge irrigation system has a 5 percent uncertainty discount. An NRCS or SCC farm conservation plan makes you eligible to waive the uncertainty discount.

EXAMPLE Con't

After reading the Best Management Practice List document and consulting with the SCC, John selects a sediment basin for his field.

At the field scale, according to Table 2 on page 3 of the BMP List, the sediment basin will be 80 percent effective at trapping phosphorus run-off. The table indicates that a 10 percent uncertainty discount be subtracted from the efficiency measure, but John develops a conservation plan in consultation with the SCC to waive the uncertainty discount.

John calculates that his chosen BMP will reduce phosphorus run-off:

Baseline Load x (BMP Efficiency - Uncertainty Discount)
9420 x (0.80 - 0) = 9420 x 0.80 = **7536 Field Edge Reductions (lbs./year)**

III. Account for Your Water Quality Contribution

Next, you must account for your water quality contribution. As a condition of trading within Idaho, all parties must make a contribution to water quality. You will not be able to trade a portion of your reduction. DEQ will identify your contribution level to meet needed water quality improvements. The SCC will know your water quality contribution level.

EXAMPLE Con't

John knows that to participate in trading he must set aside a water quality contribution consistent with reductions identified for meeting needed water quality improvements. John learns from the SCC that agricultural sources in his subwatershed have a water quality contribution of 60 percent.

Please note that DEQ has not yet prepared an agricultural water quality contribution for the Lower Boise River—the percentage water quality contribution given here is for example purposes only! In planning for the Boise program, the water quality contribution was expected to be between 40 - 80 percent; a higher water quality contribution reduces surplus reductions. A very high water quality contribution level may require you to rethink your BMP selection or to consider not trading.

John figures his water quality contribution as:
Baseline Pounds x Water Quality Contribution percentage
9280 x 60 percent = **5652 Water Quality Contribution (lbs./year)**

John figures his Surplus Field Edge Reductions
Field Edge Reductions – Water Quality Contribution
7536 – 5652 = **1884 Surplus Field Edge Reductions (lbs./year)**

IV. Adjust Reductions for Impact on Water Quality

Finally, you must adjust your surplus field edge reductions to reflect that not all of the run-off impacts water quality. Depending on your location in the watershed, you may have to apply up to three conversion factors. Your field edge reductions will be more valuable as tradeable credits, from a financial and water quality improvement perspective, the closer you are located to your watershed's water quality concern area.

Your marketplace's BMP List Document will contain the needed conversion factors. The River Location Ratio accounts for the farm location in the watershed. The Site Location Factor considers the farm's run-off characteristics. The Drainage Delivery Ratio accounts for the property location distance from a drain. Using these three factors, you can adjust your reductions for impact on water quality.

EXAMPLE Con't

Please note that the Lower Boise River has some of the most complicated hydrology in Idaho. Other watersheds may be less complicated and may require fewer discount ratios.

River Location Ratio: On page 5 of the BMP List Document, in Table 7 ("Location Ratios") John finds that, as determined by his location on Conway Gulch, he has a River Location Ratio of 0.95. This ratio indicates that 95 percent of his phosphorus run-off that reaches the Boise River will arrive at the point of water quality concern (Parma).

Drainage Delivery Ratio: John finds the formula for Drainage Delivery Ratios on page 6 of the BMP List Document to account for transmission loss in the subwatershed channel. John calculates his Drainage Delivery Ratio, based on his location 2.5 miles from the river using the given formula, (100-2.5)/100, as 0.975.

Site Location Factor: On page 6 of the BMP List Document in Table 8 ("Site Location Factors") he determines that because his land run-off does not flow directly to a drain, but through other fields prior to entering a drain, he has a Site Location Factor of 0.80. This indicates that only 80 percent of his field edge phosphorus run-off reaches the subwatershed channel.

John can now adjust his Surplus Field Edge Reductions for impact on water quality:
Potential Reductions x River Location Ratio x Drainage Delivery x Ratio Site Location Factor
1884 x 0.95 = **1790 lbs./year**
1790 x 0.975 = **1745 lbs./year**
1745 x 0.80 = **1396 Tradeable Credits (lbs./year)**

John knows he generates 1396 pounds of Tradeable Credits a year during irrigation season. For purposes of trading forms to be filed later on, John also converts his Tradeable Credits into a monthly load based on the weighted average soil loss found in Table 5 on page 4 of the BMP List.

Tradeable credits x Monthly Percent Soil Loss
April = 1396 lbs x 8.5 percent = 119 lbs./month
May = 1396 lbs x 28.1 percent = 392 lbs./month
June = 1396 lbs x 39.9 percent = 557 lbs./month
July = 1396 lbs x 19.4 percent = 271 lbs./month
August = 1396 lbs x 3.6 percent = 50 lbs./month
September = 1396 lbs x 0.4 percent = 6 lbs./month
October = 1396 lbs x 0.1 percent = 1 lbs./month

4. WHAT ARE THE FINANCIAL CONSIDERATIONS FOR TRADING?

BMP cost will vary depending on your chosen BMP, and the cost will be an important factor in your decision making process. The SCC is your best resource to investigate the BMP cost.

In addition to the initial BMP implementation cost, be sure to consider the operating cost, including any monitoring requirements. The buyer, as part of your contract, may agree to pay monitoring costs.

There also will be additional costs in terms of your time and legal expenses for developing a private contract. To help limit legal costs, you can find model contract language available from the SCC and the Idaho Clean Water Cooperative (ICWC) or use SCC or NRCS financial assistance program contracts as a template.

Make sure to consider cost-share programs. Many BMPs will qualify for cost-sharing programs available from various agencies, including DEQ, the NRCS, and the SCC. DEQ has a complete list of opportunities (see contact details in Appendix A).

Revenue from selling your tradeable credits may offset your costs. DEQ will establish marketplaces when it expects buyers and sellers will experience financial gains. In this case, you should expect some BMPs will generate revenue sufficient to justify investment. In addition to improved water and pollutant management benefits, you may offset some or all of the BMP cost with trading revenue within a couple of years.

EXAMPLE Con't

Through consultation with the SCC, John knows that the sediment basin has a capital cost of $9,000 plus operating costs of $4,000 per year over the 20 year life of the BMP, and $900 in legal fees associated with negotiating a contract. He figures that he can consistently supply 271 pounds per month during the high season, May, June, and July (for a total of 813 pounds per year) and sell them at $16 per pound.

John knows of several cost-sharing programs that can help with the cost of a sediment basin. While he had heard of several programs, he consulted the SCC for a list of options in the Lower Boise Watershed. The USDA NRCS approves John's application for cost-share for a 50/50 BMP cost split. He will, therefore, pay back the BMP investment in the first irrigation season, with a profit thereafter of approximately $9,000 a year.

In the table below, John calculates a five year profit/loss projection for his estimated revenues and cost:

Year	1	2	3	4	5
Lbs/Year	813	813	813	813	813
Price per Pound	$ 16.00	$ 16.00	$ 16.00	$ 16.00	$ 16.00
Total Revenue	$ 13,008.00	$ 13,008.00	$ 13,008.00	$ 13,008.00	$ 13,008.00
BMP Cost	$ 9,000.00				
Cost-Share Split	$ (4,500.00)				
Legal Fees	$ 900.00				
Maintenance Cost	$ 4,000.00	$ 4,000.00	$ 4,000.00	$ 4,000.00	$ 4,000.00
Total Cost	$ 9,400.00	$ 4,000.00	$ 4,000.00	$ 4,000.00	$ 4,000.00
Annual Profit/Loss	$ 3,608.00	$ 9,008.00	$ 9,008.00	$ 9,008.00	$ 9,008.00
Cumulative Profit/Loss	$ 3,608.00	$ 12,616.00	$ 21,624.00	$ 30,632.00	$ 39,640.00

Note - Profit/Loss not discounted

5. HOW DO YOU EXECUTE A TRADE?

Completing a pollutant trade requires four steps:

A. Negotiate a private contract;
B. Establish trading credits through your BMP;
C. Complete the trading forms and register with the Idaho Clean Water Cooperative (ICWC);
D. Monitor, maintain, and enable verification of the BMP as required and agreed to in your contract.

A. Negotiate a Private Contract

Pollutant trading is voluntary. It is conducted between two private parties and does not create additional regulation. Under DEQ pollutant trading policy, Federal Clean Water Act regulatory liability remains with the buyer as the permitted source. Once you find a willing buyer for your tradeable credits, you need to negotiate a private contract with them. The contract likely resembles other private contracts for the delivery of a commodity. It can include the agreed reductions price, contract length, payment terms, and service level agreements (including monitoring, maintenance, and verification schedules). As with any private contract, the trading contract is not a public document.

EXAMPLE Con't

In February, after reviewing potential buyer options identified through the ICWC, John decides to approach The Grain Company, a large milling operator, to sell his reductions. To help meet its water quality obligations, The Grain Company would like to purchase 271 pounds per month during the height of the irrigation season, May, June, and July. They settle on a price of $16 a pound and draw up a contract based on the SCC model contract provided.

B. Establish Trading Reductions Through the Chosen BMP

You will be responsible to implement the BMP consistent with the terms of your private contract and potentially cautionary agreements with the buyer. If you initiate a project involving cost-share funds, you will be required to develop a farm plan using the conservation planning process. Under this process, technicians from the NRCS or the SCC, in cooperation with you, will assess farm conditions, identify appropriate BMPs, and develop a farm plan including detailed BMP design. Even if you do not use cost-share funds for your BMP, you are strongly encouraged to consult with the SCC to best ensure your BMP meets the NRCS Field Office Technical Guide design parameters.

EXAMPLE Con't

With his calculations done, his cost-share approved, and a contract in place, Mark is ready to install his sediment basin. After referencing the NRCS Field Office Technical Guide, he completes his farm plan with help from SCC technicians. He contracts The Basin Company to install the BMP in the southwest corner of his 300 acres by the end of March.

C. Complete the Trading Forms and Register with the ICWC

Pollutant trading in Idaho requires you to complete two forms: a Reduction Credit Certificate and a Trade Notification Form (see Appendix C for examples). Complete and submit the forms only after you have implemented the BMP.

The Reductions Credit Certificate identifies your tradeable credits. Completed by the buyer, this form certifies the establishment of the BMP and appropriate adjustments to the pollutant reductions to reflect water quality impact. The certificate will characterize your tradeable credit by an amount and a time period. For agriculture, this will typically be pounds per month during the growing season. To prepare this form, the buyer will need to verify BMP installation.

Both the buyer and the seller complete the Trade Notification Form to report the number of pounds per month traded. This information is precisely what you negotiated in the private contract. The form, however, does not require price information. Under this form, the buyer certifies that they approve the transfer of reductions to satisfy their regulatory obligations. The buyer's water quality permit will have monthly reporting requirements that can include an automatic trade each month.

In signing the Trade Notification Form, you will agree to grant permission to the buyer (as well as SCC, DEQ, and EPA representatives as necessary) to access the BMP on your property. The sole purpose of access is to ensure the buyer's compliance with their permit. The language on page 2 in the Trade Notification Form which states, "I hereby grant permission to access the BMP described above at reasonable times to the NPDES permit holder purchasing this credit and the Idaho Soil Conservation Commission for the exclusive purpose of verifying the information contained in this document and in any reduction Credit Certificate pertaining to the BMP described above...such access will extend to the Idaho Department of Environmental Quality and the U.S. Environmental Protection Agency" makes this clear.

The buyer will submit the two forms to register the trade with the ICWC. The forms are your proof of established tradeable credits and a record of the agreement to sell your reductions. The ICWC will respond to the form submission with a written confirmation of your registration.

EXAMPLE Con't

On May 1st, John invites The Grain Company to inspect his sediment basin to complete the Reductions Credit Certificate. In addition, John and representatives from The Grain Company jointly complete the Trade Notification Form to report their agreement. The Grain Company agrees to deliver both forms to the ICWC. John then receives a Trade Summary Report from the ICWC that confirms proper registration of the trade.

D. Monitor, Maintain, and Enable Verification as Required and Agreed to in the Contract

As part of DEQ's approved BMP list, your BMP will have monitoring and maintenance requirements. You must monitor and maintain the BMP consistent with your conservation plan, the Field Office Technical Guide, and your contract.

Verification is likely to take three forms:

1. **Contract-Driven**: the buyer, or a buyer's representative, will conduct periodic onsite visits (the frequency is dictated by the BMP List document) primarily during the irrigation season.
2. **Cost-Share Program Driven**: the SCC will likely conduct onsite reviews for any BMP funded in part or in full by state-administered cost-share programs.
3. **Regulatory-Driven**: DEQ or EPA can request onsite BMP visits through the SCC to verify compliance with the buyer's water quality permit.

EXAMPLE Con't

The BMP List document indicates John must review the monitoring and maintenance of the sediment basin before and in the middle of the irrigation season. At the end of May, the SCC arranges a visit with John in accordance with his NRCS cost-share program which requires BMP review twice during the irrigation season. The SCC will, upon request, share the report with DEQ and EPA to verify that The Grain Company is complying with their water quality permit.

SUMMARY

Pollutant trading provides an opportunity to address water quality concerns in Idaho's rivers and lakes without new regulation. Pollutant trading enables you to participate affordably, or profitably, in improving water quality. The SCC, NRCS, IWUA, DEQ and BoR all support and encourage the development of trading marketplaces. Although the reductions calculations may seem complex at first, SCC technicians and Internet resources can help you determine your trading potential. Appendix A provides all the contact and resource information you should need to understand and execute a water quality trade.

APPENDIX A: ADDITIONAL RESOURCES

The agencies associated with pollutant trading in Idaho (and their relevant websites):

- Idaho Department of Environmental Quality (DEQ)
  http://www.deq.state.id.us
- Idaho Soil Conservation Commission (SCC)
  http://www.scc.state.id.us
- Environmental Protection Agency (EPA) Region 10
  http://www.epa.gov/region10
- U.S. Department of Agriculture Natural Resources Conservation Service
  http://www.nrcs.usda.gov

People that can assist you in your next trading steps:

Soil Conservation Commission
David Ferguson
(208) 332-8654
dferguso@agri.state.id.us

National Resource Conservation Service
George Davis
(208) 454-8684 x128
george.davis@id.usda.gov

Idaho Water Users Association
Norm Semanko
(208) 344-6690
norm@iwua.org

Department of Environmental Quality
Susan Burke
(208) 373-0574
sburke@deq.state.id.us

EPA Region 10
Claire Schary
(800) 424-4372
schary.claire@epa.gov

Important documents (all are available from the SCC):

- Idaho Pollutant Trading Guidance—also available at the website
  http://www.deq.state.id.us/water/waste_water/pollutant_trading_guidance_nov03.pdf
- Lower Boise River Watershed BMP List (see the Pollutant Trading Guidance appendices)
- Reduction Credit Certificate
- Trade Notification Form
- NRCS Field Office Technical Guide

APPENDIX B: REDUCTION CALCULATION SUMMARY

Idaho Trading Credits Calculations

The series of calculations below summarize the 4 steps of reductions calculations as described in the example in the text.

A) Baseline Load	300	Farm Acres
	15.7	SISL BSL Tons of Soil Lost Per Acre per year (BMP List)
	2	Pounds Phosphorus Per Ton of Soil Lost (BMP List)
		= *Acres x SISL BSL x lbs. of phosphorous per ton of soil*
	9,420	**Baseline Load (lbs./year)**

B) BMP Reduction	80%	BMP efficiency (BMP List)
	0%	Uncertainty discount (BMP List)
	80%	Total BMP impact percentage
		= *Baseline Load x Total BMP impact percentage*
	7,536	**Field Edge Reductions (lbs./year)**

C) Water Quality Contribution	60%	Water Quality Contribution percentage
		= *Baseline Load x Water Quality Contribution percentage*
	5,652	**Water Quailty Contribution**
		= *Field Edge Reductions - Water Quality Contribution*
	1,884	**Surplus Field Edge Reductions (lbs./year)**

D) Adjusted Reduction	0.95	River location ratio for the Conway Gulch (BMP List)
	0.975	Drainage delivery ratio based on location 2.5 miles from the delivery point (BMP List)
	0.80	Site location factor for indirect flow to a drain (BMP List)
		= *Surplus Field Edge Reductions x river location ratio x site location factor x drainage delivery ratio*
		1,884 x 0.95 = 1790
		1,790 x 0.975 = 1,745
		1,745 x 0.80 = 1,396
	1,396	**Tradeable Credits (lbs./year)**
Monthly breakdown	8.5%	April weighted average (BMP List)
	28.1%	May weighted average (BMP List)
	39.9%	June weighted average (BMP List)
	19.4%	July weighted average (BMP List)
	3.6%	August weighted average (BMP List)
	0.4%	September weighted average (BMP List)
	0.1%	October weighted average (BMP List)
		= *Tradeable Credits x monthly weighted average soil loss*
	119	April tradeable credit pounds
	392	May tradeable credit pounds
	557	June tradeable credit pounds
	271	July tradeable creidt pounds
	50	August tradeable credit pounds
	6	September tradeable credit pounds
	1	October tradeable credit pounds

APPENDIX C: TRADING FORMS

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-TRADE NOTIFICATION FORM-

DATE RECEIVED:
(To Be Completed By the Idaho Clean Water Cooperative)

– TO BE COMPLETED BY THE BUYER –	
NAME OF BUYER (POTW OR COMPANY)	***THE GRAIN COMPANY***
WATER QUALITY PERMIT NUMBER	***12345***
NAME OF AUTHORIZED REPRESENTATIVE (OF BUYER)	***JIM SMITH***
PHONE NUMBER	***208 - 123 - 4567***
– TO BE COMPLETED BY THE SELLER –	
NAME OF SELLER	***JOHN DOE***
SELLER'S PERMIT NUMBER (IF APPLICABLE)	***N/A***
NAME OF AUTHORIZED REPRESENTATIVE (OF SELLER)	***JOHN DOE***
PHONE NUMBER	***208 - 987 - 6543***

– TO BE COMPLETED BY EITHER PARTY –

AMOUNT OF PHOSPHORUS TRADED _____ LBS./DAY FOR:

1) The month of_____ (if purchasing verified credits from a Non-Permitted Source,
Provide BMP Identifier: _____) **OR**

2) ___**MAY 2004**_____(month/year) to ____**JULY 2004**_____(month/year), to create an automatic transfer from the Seller's account to the Buyer's account, upon the recording of a valid Reduction Credit Certificate for that amount in the trade tracking database by the 10th day of the second month following generation.

CERTIFICATION:

This form has been prepared for the purpose of submitting the information contained in it to the U.S. Environmental Protection Agency.

FOR PERMITTED SOURCE BUYER:

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I further certify that I am authorized to bind the party on behalf of which I am signing to the terms of this document. I acknowledge that the transfer of credits specified in this document is contingent on the generation of the underlying credits, and my certification of those credits by a Reduction Credit Certificate corresponding to the BMP identified above and the applicable monitoring period. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. See 18 U.S.C. § 1001 and 33 U.S.C. § 1319. *(Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)*

I understand that the amount of credits to be transferred by this form is determined initially by the amount established in the first completed Reduction Credit Certificate that is received by the Trade Tracking System for the BMP identified for that month, and then by the amount specified by the Trade Notification Form, up to the amount of credits remaining in the actual BMP credit calculation. I understand that the order in which a Trade Notification Form is processed when multiple Trade Notification Forms are received that request to transfer credits from a single seller's account is determined by the order in which they were received for recording by the Trade Tracking System.

SIGNATURE OF PERMITTED SOURCE BUYER:_____*Jim Smith*_____ ***DATE:*** ___*4/01/04*__

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FOR NON-PERMITTED SOURCE SELLER WHO OWNS OR IS THE LESSEE OF THE PROPERTY ON WHICH THE ABOVE REFERENCED BMP IS LOCATED:

I hereby transfer all or part of the credit from BMP Identifier _____, for the time period specified in this document, to the Buyer identified in this document. I hereby grant permission to access the BMP described above at reasonable times to the NPDES permit holder purchasing this credit and the Idaho Soil Conservation Commission for the exclusive purpose of verifying the information contained in this document and in any Reduction Credit Certificate pertaining to the BMP described above. All information collected or received during or pursuant to such access to the BMP shall be used solely for purposes of regulatory compliance of the NPDES permit holder and not for any other purpose whatsoever. Such access shall extend to the Idaho Department of Environmental Quality and the U.S. Environmental Protection Agency to the extent set forth in the Memorandum of Agreement, dated 04*/27/2001* . I understand that the amount of credits to be transferred by this form is determined initially by the amount established in the first completed Reduction Credit Certificate that is received by the Idaho Clean Water Cooperative for that BMP for that month, and then by the amount specified by the Trade Notification Form, up to the amount of credits remaining in the seller's account. I understand that the order in which a Trade Notification Form is processed when multiple Trade Notification Forms are received that request to transfer credits from a single seller's account is determined by the order in which they were received for recording by the Idaho Clean Water Cooperative.

_____*Jim Smith*_____ DATE: _____4/01/04_____

SIGNATURE OF SELLER

SELLER OF NONPOINT SOURCE REDUCTION BY OTHER THAN A POINT SOURCE OR THE NONPOINT SOURCE INVOLVED IN THE BMP:

I hereby transfer all or part of the credit from BMP Identifier _____, for the time period specified in this document, to the Buyer identified in this document. I understand that the amount of credits to be transferred by this form is determined initially by the amount established in the first completed Reduction Credit Certificate that is received by the Idaho Clean Water Cooperative for that BMP for that month, and then by the amount specified by theTrade Notification Form, up to the amount of credits remaining in the seller's account. I understand that the order in which a Trade Notification Form is processed when multiple Trade Notification Forms are received that request to transfer credits from a single seller's account is determined by the order in which they were received for recording by the Idaho Clean Water Cooperative.

_____ DATE: _____

SIGNATURE OF SELLER

FOR PERMITTED SOURCE SELLER:

I hereby reduce the phosphorus discharge allowance under the TMDL and under NPDES Permit Number _____by the amount identified in this document.

_____DATE: _____

SIGNATURE OF SELLER

Lower Boise River Nutrient TMDL

– REDUCTION CREDIT CERTIFICATE –

VALID FOR REDUCTION ACTIVITY FOR MONTH(S) OF APRIL-OCTOBER **YEAR** 2004

NAME OF NON-PERMITTED SOURCE: JOHN DOE

CONTACT NAME: JOHN DOE

ADDRESS: 1515 FARM DRIVE, CONWAY GULCH, IDAHO 83799

PHONE NUMBER: 208-987-6543

BEST MANAGEMENT PRACTICE (BMP) IDENTIFIER:

– Type of BMP: FIELD SCALE SEDIMENT BASIN

– Location of BMP: SOUTHWEST CORNER OF PROPERTY

MONITORING METHOD: CALCULATION

MONITORING FREQUENCY: BEFORE AND MIDDLE OF ALL IRRIGATIONS

PARMA POUNDS (AMOUNT OF MARKETABLE CREDITS):

Calculated or Measured Results	**9420** (Baseline Load)
Multiply **Baseline Load** by **BMP efficiency** minus the **Uncertainty Discount**	**7536** (Field Edge Reductions)
Multiply **Water Quality Contribution** *by* **Baseline Load**	**60%** = **5652** (Water Quality Contribution)
Subtract **Water Quality Contribution** *from* **Total Reduction**	**1884** (Surplus Field Edge Reductions)
Multiply by **River Location Ratio**	**0.95** = **1790**
Multiply by **Drainage Delivery Ratio** (if applicable)	**0.975** = **1745**
Multiply by **Site Location Factor** (if applicable)	**0.80** = **1396** (**Tradeable Credits**)

CERTIFICATION:

This form has been prepared for the purpose of submitting the information contained in it to the U.S. Environmental Protection Agency.

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein; and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I further certify that I am authorized to bind the party on behalf of which I am signing to the terms of this document. I further certify that the BMP, the monitoring, and the credit calculation described above satisfies the requirements for that type of BMP as set forth in the BMP list. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. See 18 U.S.C. § 1001 and 33 U.S.C. § 1319. *(Penalties under these statutes may include fines up to $10,000 and or maximum imprisonment of between 6 months and 5 years.)*

SIGNATURE OF BUYER : ***John Doe*** DATE: ***4/1/04***